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Vol.11, No.1.

August 1941.

Agriculture.

Opportunities for improving southern agriculture.
American fertilizer. v.95, no.3.
p.8-9, 20.

By Dr. R.F. Poole.
August 2, 1941.

Air Conditioning.

Louvered vents in roof of house to permit attic to 'breathe'.

Popular mechanics. v.76, no.4. October 1941. p.65.

Attic ventilation, by means of all-metal louvers now available for pitched roofs and walls, helps cool whole house in summer. Placed at high and low positions on roof, they provide cross ventilation, permitting escape of heated air through attic ceiling and allowing entry of cooler air through vents located near floor level. In winter they solve problem of ridding attic of excess humidity that results from air conditioning during heating season, thus preventing accumulation of moisture on floors, rafters and ceilings. Slant roof louvers provide waterproof fit with shingles or roofing material, and internal baffle gives protection in all kinds of weather, while bronze screen stops insects, birds, etc. Wall louvers are easy to install in brick, stucco or frame, and have same protection against weather and insects.

Alcohol Fuel.

Power alcohol from wheat.
August 12, 1941.

Australian sugar journal.
p.198-199.

v.33, no.5.

Brooder Houses.

New portable colony brooder house.
lin.

v.26, no.209.

By D. C. Kennard and V. D. Chamberlin.
In Bimonthly bulletin, Ohio agricultural experiment station.
March-April, 1941.

p.54-55.

Building Construction.

Analysis of building frames with semi-rigid connections: Discussion.

By Messrs. S. D. Lash, Dean F. Peterson, Jr., and R. W. Stewart.

American society of civil engineers. Proceedings. v.67, no.7.
September 1941. p.1339-1347.

Analysis of building frames with semi-rigid connections: Discussion.

By Jaroslav J. Polivka. American society of civil engineers.

Proceedings. v.67, no.8. October 1941. p.1461-1464.

Building Construction. (Cont'd.)

- Bricklaying: an analysis of the trade. By George A. McGarvey.
 Washington, U. S. Govt. print. off., 1941. 238p. U.S. Office
 of education. Federal security agency. Vocational division. Bulletin
 no.208. Trade and industrial series, no.60.
- Investigation of steel rigid frames: Discussion. By A. C. Barrow.
 American society of civil engineers. Proceedings. v.67, no.7.
 September 1941. p.1239-1241.
- Investigation of steel rigid frames: Discussion. By W. E. Black.
 American society of civil engineers. Proceedings. v.67, no.8.
 October 1941. p.1448-1452.
- Moments in continuous rectangular slabs on rigid supports: Discussion.
 By Messrs. Ralph E. Byrne, Jr. and Pierce P. Furber. American
 society of civil engineers. Proceedings. v.67, no.7.
 September 1941. p.1278-1282.
- Plastic theory of reinforced concrete design: Discussion. By Messrs.
 O. G. Julian and Charles S. Whitney. American society of civil
 engineers. Proceedings. v.67, no.7. September 1941.
 p.1245-1255.
- Rigid frames without diagonals (the Vierendeel truss): Discussion.
 By Messrs. A. A. Eremin and Yves Nubar. American society of civil
 engineers. Proceedings. v.67, no.7. September 1941.
 p.1263-1268.

Building Materials.

- Brickmaking on the farm. By J. W. Cleghorne. Pretoria, Union of
 South Africa, 1941. p.1-13. Union of South Africa.
 Department of agriculture and forestry. (Soil and veld conservation
 series no.4) Bulletin no.231. Reprinted from Farming in South Africa.
 April 1941.
- Earth suitable for pisé construction. Journal of Jamaica agricultural
 society. v.45, no.5. May 1941. p.184.
- Gluing wood in aircraft manufacture. By T. R. Truax. Washington,
 U. S. Govt. print. off., 1934. 58p. U. S. Department of
 agriculture. Technical bulletin no.205.
- Material handbook: an encyclopedia for purchasing agents, engineers, execu-
 tives, and foremen. By George S. Brady. New York and London,
 McGraw-Hill book company, inc., 1940. 591p.
- Use of earth as a building material. By F. C. Fenton.
 Manhattan, Kansas, 1941. 34p. Kansas. Engineering exper-
 ment station. Bulletin no.41.

Concrete.

Expansion of concrete through reaction between cement and aggregate: Discussion. By Thomas E. Stanton. American society of civil engineers. Proceedings. v.67, no.7. September 1941. p.1402-1418.

Corrosion.

Atmospheric corrosion of wire and wire products. By I. D. Mayer. In research aids farm progress. Fifty-third annual report of Purdue University agricultural experiment station. Lafayette, Ind., [1941] p.24.

Cotton.

King cotton comes back. Popular mechanics. v.76, no.2. August 1941. p.92-95, 166-168.

Cotton Gins and Ginning.

Better ginning with higher gin-saw speeds. By Charles A. Bennett and Francis L. Gerdes. Cotton and cotton oil press. v.42, no.18. August 30, 1941. p.5.

Cotton ginning machinery and equipment, 1940. Washington, D. C., [1941]. 43p. U.S. Department of commerce. Bureau of the census.

Preparing to gin cotton crops. By J. Lee Smith. Florida grower. v.49, no.8. August 1941. p.4.

Cotton Machinery.

Compression of cotton at cotton gins. By Charles A. Bennett. Agricultural engineering. v.22, no.8. August 1941. p.281-283.

Crops (Drying).

Drying artificially heated wheat with unheated air. By C. F. Kelly. Agricultural engineering. v.22, no.9. September 1941. p.316-320.

Garlic drying. By H. P. Smith, M. H. Byrom and G. E. Altstatt. In fifty-third annual report of Texas agricultural experiment station, 1940. College Station, Tex., 1941. p.122-123.

Summary of barn hay curing work. By John A. Schaller. Agricultural engineering. v.22, no.8. August 1941. p.292, 295.

Dams.

Cavitation in outlet conduits of high dams: Discussion. By J.H. Douma.
American society of civil engineers. Proceedings. v.67, no.8.
October 1941. p.1587-1590.

Design and construction of San Gabriel dam no.1. By Paul Baumann.
American society of civil engineers. Proceedings. v.67, no.7.
September 1941. p.1199-1238.

Dehydration.

Dehydration of sweet potatoes for livestock feed. By Arthur B. Kennerly.
Agricultural engineering. v.22, no.8. August 1941.
p.296.

Preservation of fruits and vegetables by commercial dehydration.
By E. M. Chace, W. A. Noel and V. A. Pease. Washington, U. S.
Govt. print. off., 1941. 46p. U. S. Department of agri-
culture. Circular no.619.

Doors.

Factory-fitted douglas fir entrance doors. Washington, U. S. Govt.
print. off., 1941. 22p. National bureau of standards.
Commercial standard CS91-41.

Drainage.

Farm drainage in ten easy lessons. By David H. Harker.
Lafayette, Ind., 1941. 16p. Indiana. Purdue university.
Extension service. Extension bulletin no.269.

Electric Wiring.

Electric wiring (Domestic). By E. Molloy. New York, N. Y.,
Chemical publishing co., inc., 1941. 240p. A practical work
for installation engineers, contractors and electric wiremen.

Electricity in the Home.

Electricity serves the home. By Gail M. Redfield and Virginia E. Berry.
Lafayette, Ind., 1941. 22p. Indiana. Purdue university.
Extension service. Extension bulletin no.266.

Electrical household equipment: Selection, use, care. By Ida C. Hag-
man. Lexington, Ky., 1941. 30p. Kentucky. Agricultural
extension service. Circular no.369.

Electricity on the Farm.

How electricity is coming to Florida farms. By C. E. Crow.
Florida grower. v.49, no.8. August 1941. p.5, 11, 12.

1-5-41

Electricity on the Farm. (Cont'd.)

- Rural electrification in the United States. By Royden Steward.
Edison electric institute bulletin. v.9, no.9.
September 1941. p.381-386. Part I. The pioneer period,
1906-1923.
- U. S. census dramatizes extraordinary progress in rural electrification.
Edison electric institute bulletin. v.9, no.9.
September 1941. p.375-379.

Erosion Control.

- Publications on gully erosion control. Agricultural engineering.
v.22, no.10. October 1941. p.364.
- Run-off and erosion from different soil types. By T. C. Peele.
In fifty-third annual report of the South Carolina experiment station.
Clemson, S. C., 1940. p.38-39.
- Saving the top soil. By Sydney A. Anderson. California citrograph.
v.26, no.8. June 1941. p.220. Erosion control practices
on a southern California bean farm.
- Soils and security. By H. H. Bennett. Washington, U. S. Govt.
print. off., 1941. 25p. U. S. Department of agriculture.
Soil conservation service.

Evaporation.

- Measurements of the evaporation rate. In fifty-first annual report of
the Arizona agricultural experiment station for the year ending
June 30, 1940. Tucson, Ariz., 1941. p.33-37.

Farm Machinery and Equipment.

- Corn picker specifications. Implement & tractor. v.56, no.19.
September 13, 1941. p.32.
- Decade of farm mechanization. Implement & tractor. v.56, no.20.
September 27, 1941. p.8-9, 26. Census analysis shows
accelerating tempo, and indicates high maintenance service potential.
- Dynamic properties of soils as applied to the elements of implement design.
Comparative tests with different plow shapes and materials.
In fiftieth annual report of the Alabama Polytechnic institute,
Agricultural experiment station. Auburn, Ala., 1940. p.9.
- Dynamometer for testing farm machinery. By E. L. Barger and
W. J. Fromersberger. Agricultural engineering. v.22, no.9.
September 1941. p.323-324.

Farm Machinery and Equipment. (Cont'd.)

- Farm equipment steel consumption. v.62, no.15. July 24, 1941. Farm implement news. p.31.
- Farm machinery and farming methods in soil conservation. Cutter and R. A. Norton. October 1941. Soil conservation. p.100-106. By L. S. v.7, no.4.
- Investigations on the power requirements and corn borer kill secured with the corn husker shredder. By R. H. Wilenian, G. A. Ficht, T. E. Hinton. In research aids farm progress. Report of the director of Purdue university agricultural experiment station, 1940. Lafayette, Ind., 1940. p.19-20.
- Machinery for harvesting bluegrass seed. Agricultural engineering. p.353-354. By J. B. Kelley. v.22, no.10. October 1941.
- Machinery for sugar cane production. Agricultural engineering. p.322, 324. By Harold T. Barr. v.22, no.9. September 1941.
- Machinery investigations show progress. Through the leaves. p.37-41. By H. B. Walker. v.29, no.5. September 1941.
- Pick-up baler ties hay in slices that pull apart easily. mechanics. v.75, no.6. June 1941. Popular mechanics. p.61. Baled hay is produced in slices by new pick-up baler that cuts and presses hay into separate layers so it falls apart like sliced bread when wires are cut. This saves tearing hay from bale, which is of conventional size and weight, and thus eliminates waste when it is used. Mounted on rubber tires, lightweight machine operates as fast as eight miles an hour in baling hay or straw left in field by grain combines, and bales up to five tons an hour. Operating efficiency is increased by continuous feeding into baler and elimination of need for wooden divider blocks, bales being separated automatically and measured accurately into equal lengths. Fuel consumption of baler engine is about one quart per ton.
- Pyrethrum reaper opens up a new commercial crop. v.76, no.2. August 1941. Popular mechanics. p.49. Machine combines feature of corn binder and cotton stripper.
- Simple power wood saw. engineering. v.22, no.9. By M. A. Sharp. September 1941. Agricultural p.310.
- Some important farm machinery and soil conservation relationships. By M. L. Nichols and R. B. Gray. v.22, no.10. October 1941. Agricultural engineering. p.341-343.
- Windrowing before combining got severe test in 1940. In what's new in farm science. Part I, fifty-seventh annual report for year ended June 30, 1940. Madison, Wisc., 1940. p.67-68. Wisconsin. Agricultural experiment station. Bulletin no.450.

Farmhouses.

New approaches to farmhouse design, construction and equipment.
By Joseph W. Simons. In 42nd annual convention of association
of southern agricultural workers. Proceedings. Raleigh, N. C.,
Capital printing co., 1941. p.78-79.

Fats and Oils.

Fats and oils industry---July, 1941. By Charles E. Lung.
Cotton and cotton oil press. v.42, no.18. August 30, 1941.
p.A-5.- A-8.

Fertilizer Placement.

Putting fertilizer where it can do the most good. By Firman E. Bear.
American fertilizer. v.95, no.3. August 2, 1941.
p.10-11.

Fertilizers.

Utilization of barnyard manure for Washington soils. Pullman, Wash.,
1941. 8p. Washington. State college. Extension service.
Extension bulletin no.267.

Fire Protection.

Approved fire protection. National safety news. v.44, no.2.
August 1941. p.22-23, 70-71.
Selected papers from the 1940 Indiana fire school. Compiled and
edited by W. A. Knapp. Lafayette, Ind., 1940. 79p.
Purdue university. Engineering extension department. Extension series
no.49.

Flax.

Linon flax. By A. G. Elliott and P. B. Lynch. New Zealand
journal of agriculture. v.63, no.1. July 15, 1941.
p.1, 3-5, 7.

Floods and Flood Control.

Direct method of flood routing: Discussion. By Messrs. Ray K. Linsley,
Jr., Harold C. Hickman, Robert B. Horonjeff and Herbert G. Crowle,
L. K. Sherman, and Alfred L. Brosio. American society of civil
engineers. Proceedings. v.67, no.8. October 1941.
p.1567-1586.

Evaluation of flood losses and benefits: Discussion. By Messrs.
E. L. Chandler, E. F. Chandler and Charles B. Burdick. American
society of civil engineers. Proceedings. v.67, no.7.
September 1941. p.1377-1382.

Floods and Flood Control. (Cont'd.)

Evaluation of flood losses and benefits: Discussion. By Messrs.
H. K. Barrows, Roger E. Amidon, Hyman J. Fine and Otto F. Buzhardt.
American society of civil engineers. Proceedings. v.67, no.8.
October 1941. p.1591-1602.

Los Angeles flood control project. By N. A. Matthias.
Military engineer. v.33, no.191. September 1941.
p.382-388.

Flow of Heat.

Estimating heat flow through sunlit walls. By C. O. Mackey and
L. T. Wright, Jr. Heating and ventilating. v.38, no.6.
June 1941. p.32-33. Part 5. Comparison of various methods.

Foods, Frozen.

Optimum conditions for frozen foods in refrigerated storage.
By A. E. Stevens. Ice and refrigeration. v.101, no.2.
August 1941. p.207-210.

Heat Transmission.

Applied heat transmission. By Herman J. Stoever. New York and
London, McGraw-Hill book company, inc., 1941. 226p.

Hotbeds and Cold Frames.

Hotbeds and coldframes. By W. R. Beattie. Revised edition.
Washington, U. S. Govt. print. off., 1941. 28p.
U. S. Department of agriculture. Farmers' bulletin no.1743.

Houses.

Arch construction without centering, part I. Further designs for hut
type buildings, part II. London, His Majesty's stationery
office, 1940. 9p. Department of scientific and industrial
research. Building research wartime building bulletin no.6.
Part I: Illustrates centerless arch type of construction. This has
been found by actual erection to be satisfactory for span of 20 feet
and will serve equally well for any smaller spans. Method eliminates
use of timber and steel with exception of very small amount of material
for lintels, doors and moulds for precast units.
Part II: Wartime building bulletin no.3 dealt with hut type buildings
as single units. This bulletin gives diagrams of types 4A and 4B
which were not illustrated in bulletin no.3. Application of three
type designs to multiple span structures is also shown.

Houses. (Cont'd.)

- Bomb-resistant house set up in 23 minutes. Popular mechanics.
v.75, no.6. June 1941. p.26. Semibombproof, in
that its walls would stop all but heaviest flying fragments, house was
designed for quick construction for defense industry workers. Walls,
floors and roof panels are precast in forms flat on ground, and are
made of aggregate which is 60 percent pumice. Only half as heavy as
ordinary concrete, it is said to be more resilient to shock. Cost of
precast house is about half that of typical frame construction. After
pouring, panels are allowed to dry for two days, then are lifted into
place on building site with truck crane. Welders join corners and
partitions. Small shelter demonstrated with precast house is of three-
inch reinforced concrete and is intended to be buried in backyard.
Impervious to damage except by direct hit, such a shelter for six
persons would cost around \$60. plus excavation and charcoal filters if
gas defense is required.
- Building for defense. Architectural forum. v.74, no.6.
June 1941. p.425-431. Converts grain bin into three room
house completely demountable. The "Dymaxion".
- Experimental low-cost housing. In science works for the farmer.
Fifty-second annual report for the fiscal year ending June 30, 1940.
Fayetteville, Ark., 1940. p.13-14. Arkansas. Agricultural
experiment station. Bulletin no.405.
- House construction. London, His Majesty's stationery office, 1940.
14p. Department of scientific and industrial research.
Building research wartime building bulletin no.7. Sets standard
for quantity of steel which can be permitted in small houses where
timber floors and roofs have been replaced by other materials. Two
type plans have been examined in detail and weight of steel required
for their construction is given. Substitution of flat roof for more
usual pitched roof raises certain other problems such as heat insula-
tion, drainage and smoky chimneys. There are short notes on these
points, also on A.R.P. factors, and sound insulation.
- Housing: The continuing problem. National resources planning board.
Washington, U. S. Govt. print. off., 1940. 60p.
- Housing for health. Science press printing co., Lancaster, Pa., 1941.
22lp. Papers presented under the auspices of the Committee on
the hygiene of housing of the American public health association.
- Log cabin construction. By A. B. Bowman. East Lansing, Mich.,
1941. 54p. Michigan state college. Extension division.
Extension bulletin no.222.
- New possibilities in low-cost home construction. By Robert L. Davison.
In Housing for health. Science press printing co., Lancaster, Pa.,
1941. p.103-108.

Houses. (Cont'd.)

- Pictured good and poor practice in frame house construction details.
Madison, Wis., 1940. 8p. U. S. Forest service. Forest products laboratory. Technical note no.242.
- Pour construire une bonne maison. Le bulletin des agriculteurs.
v.37, no.7. July 1941. p.19-21. Constructing a good house.
- Purpose of the ideal farm home plan. American lumberman.
No. 3205. May 31, 1941. p.24-26. Its uses and features fully explained. Reasons for room layout discussed. Bill of materials presented.
- TVA demountable houses solve construction camp problem. By Carroll A. Towne. Civil engineering. v.11, no.7. July 1941. p.397-400. Building camp cottage in slices, in large shop, transferring it by trailer to construction job, and reassembling it in few hours---this is TVA solution for problem of workmen's quarters that must be moved every few years. Key to scheme is use of pulley wheels supporting sections on simple pipe track. Thus parts are built originally, bolted together at factory, then separated, transported, and threaded together again, to assure perfect fit.
- Type designs for small huts. London, His Majesty's stationery office, 1940. 22p. Department of scientific and industrial research. Building research wartime building bulletin no.3. Considers hut type of building for which big demand has arisen as result of war. Whilst details of huts to be used for different purposes may vary to some extent general requirements remain very similar in all cases. Requirements of normal army living hut have been taken as basis and studies have been made of varying types of design which fulfil all normal conditions whilst reducing quantity of timber and steel used to lowest possible amount. Aim has been to lay down certain standards rather than to give exhaustive list of detail designs.

Hydrology.

- Hydrologic evaluation of watershed improvement programs.
By R. L. Stevens and E. R. Kinnear. Agricultural engineering.
v.22, no.10. October 1941. p.350-352, 354.
- Hydrologic studies. By I. D. Mayer. In research aids farm progress. Fifty-third annual report of Purdue university agricultural experiment station. Lafayette, Ind., [1941]. p.26.

Insulation.

- Insulation savings. Domestic engineering. v.158, no.3.
September 1941. p.78-79, 126-127. Types of materials used in the insulation of boilers, ducts, water heaters and furnaces are described. Directions for application of materials are given.

Insulation. (Cont'd.)

Seal comfort into your home. Popular mechanics. v.76, no.2.
August 1941. p.56-59, 162.

Irrigation.

Department of irrigation and drainage. By O. W. Monson.
In Serving Montana agriculture through research. Forty-sixth and
forty-seventh annual reports of the Montana agricultural experiment
station, July 1, 1938 to June 30, 1940. Bozeman, Montana, 1940.
p.36-37. Homemade water-lifting devices and water power utiliza-
tion. Water supply studies. Range improvement through water con-
servation. Return flow and duty of water investigations. Rural
electrification studies.

Irrigation, drainage and groundwater. In Research aids Utah agriculture
biennial report of Utah agricultural experiment station, 1938-1940.
Logan, Utah, 1940. p.76-79. Irrigation surveys.
Water-application efficiencies in irrigation and their relation to
irrigation methods. Snow surveys. Application of hydromechanics to
the design of structures for controlling groundwater.

Irrigation on wheels new wrinkle in farming. By Arthur J. Larson.
Electricity on the farm. v.14, no.5. May 1941.
p.14-15.

Orchard irrigation in Arizona. By H. J. Larson. California
citrograph. v.26, no.11. September 1941. p.320.

Supplemental irrigation. By E. B. Roe and J. K. Park.
University Farm, St. Paul, Minn., 1941. 23p. Minnesota.
Agricultural extension service. Extension bulletin no.225.

Use of water dollars. By J. C. Johnston. California citrograph.
v.26, no.9. July 1941. p.251. Discussion on present
irrigation practices.

Wheat under irrigation. By A. G. Elliott. New Zealand journal
of agriculture. v.63, no.1. July 15, 1941. p.11-13.
Need for maintaining wheat supplies and fact that little is known
regarding effect of irrigation on this important cash crop necessitated
laying down of field experiments reviewed. Increased yield of
approximately 9 bushels per acre, which at present prices is sufficient
to repay cost of bordering, has been secured. This result from trials
completed last season supplies valuable preliminary information.

Irrigation Water.

Salts in irrigation water: Discussion. By C. S. Scofield.
American society of civil engineers. Proceedings. v.67, no.7.
September 1941. p.1385-1388.

Salts in irrigation waters: Discussion. By Messrs. Herman Stabler and
M. R. Lewis. American society of civil engineers. Proceedings.
v.67, no.8. October 1941. p.1490-1496.

Land Utilization.

Land utilization. By E. S. Archibald. C.S.T.A. review.
No. 30. September 1941. p.21-23, 25, 27.

Milk Cooling.

Cold facts on milk cooling. By Geo. W. Kable. Electricity
on the farm. v.14, no.5. May 1941. p.7-8.

Mechanical milk cooling on farms. By J. R. McCalmont. Revised edition.
Washington, U. S. Govt. print. off., 1941. 20p.
U. S. Department of agriculture. Farmers' bulletin no.1818.

Miscellaneous.

Get the jump on the saboteur. By P. W. Eberhardt. Southern
power & industry. v.59, no.4. April 1941. p.46-49.

Science, national and international, and the basis of cooperation.
By Dr. A. V. Hill. Science. v.93, no.2425.
June 20, 1941. p.579-584.

Moisture Control.

How to stop moisture penetration through masonry walls.
By J. G. Trudinger. Industrial power. v.41, no.2.
August 1941. p.65-67, 98, 100, 102. Describes in detail
materials and proportions used for waterproof mortar, and tells exact
procedure for making concrete repairs by either hand or gun method.
Also discusses flashing, and method of stopping masonry leaks.

Possible effects of improved moisture conservation practices upon the
productivity and value of land. By F. L. Duley. Journal of
American society of farm managers and rural appraisers.
v.5, no.1. April 1941. p.39-52.

Motors, Electric.

Choose motors to avoid losses. By R. H. Rogers. Southern power
& industry. v.59, no.10. October 1941. p.96-101.

Electric motors on the farm may be long-lived. By Harold H. Beaty
and W. A. Thomas. Agricultural leaders' digest. v.22, no.7.
October 1941. p.23-24. Experience on typical farms
indicates that over-loading, poor or insufficient lubrication, worn
bearings, improper circuit protection and operation in dusty and wet
surroundings are principal causes of motor failure.

How to take care of motors. By F. B. Straight. Industrial power!
v.41, no.4. October 1941. p.61-64. Practical
instructions on maintenance of rotors, stators, windings, and ball
bearings are given. An easy-to-follow procedure for resistance testing
by using only voltmeter and "B" batteries is explained.

Motors, Electric. (Cont'd.)

Installation and maintenance of electric motors. By E. Molloy.
Brooklyn, N. Y., Chemical publishing co., inc., 1941. 180p.
A practical treatise for installation engineers, plant engineers and
works electricians.

Practical design of small motors and transformers. By E. Molloy.
234 King st., Brooklyn, N. Y., Chemical publishing co., inc., 1940.
176p. Explaining clearly the practical methods to be employed
in designing and constructing small electric motors and small power
transformers.

Paints and Painting.

Fall---the ideal time to paint! By G. S. Garstin. Du Pont
magazine. v.35, no.9. September 1941. p.22-23.

New casein paint has good quality. Idaho farmer. v.59, no.16.
July 31, 1941. p.20.

Painting magnesium alloys. By Robert I. Wray. Industrial and
engineering chemistry. v.33, no.7. July 1941.
p.932-937. Increasing use of magnesium alloys in numerous indus-
trial fields, especially the aircraft industry, has focused attention
on this ultralight metal. For most of these applications there is need
for serviceable protective coatings. In order to evaluate different
protective coatings, special accelerated test was used which comprised
cycles of alternate immersion in synthetic sea water, combined with
outdoor weathering at an angle of 45° to vertical facing south. By
proper selection of alloys, surface treatment, and painting system, it
has been found possible to obtain satisfactory protection on magnesium
alloys for several years, even under relatively severe service conditions

"Self-cleaning" paints. Agricultural news letter (Du Pont).
v.9, no.5. September-October 1941. p.63.

Two-coat system of house painting. By F. L. Browne. Industrial and
engineering chemistry. v.33, no.7. July 1941. p.900-910.
History of two-coat painting for new exterior woodwork and of two-coat
systems of painting is reviewed. Distinction is made between (a) two-
coat initial painting with self-priming (one paint used for both coats),
(b) two-coat painting with special primer and finish paint made for
application in thick coats, and (c) two-coat painting with special primer
but with conventional prepared paint for finish paint. Experimental data
are presented to show that, with given paint, durability depends on thick-
ness of coating whether thickness is provided by two thick coats or by
three thinner ones. When modern paints of high opacity are used, thick-
ness of coating needed for good durability is much greater than that re-
quired merely to hide wood. Two-coat painting of types a and c often
gives rise to short-lived paint jobs because necessity of building satis-
factory film thickness has not been fully appreciated by paint manufac-
turers, painters, and paint users. Two-coat systems of type b are less
likely to be applied too sparingly. Experimental data demonstrate

Paints and Painting. (Cont'd.)

superiority of well-designed special primers over self-priming for painting such woods as Douglas fir and southern yellow pine. But they show also that primer and finish paint should be designed carefully for use together because primer may give good results with some finish paints and prove incompatible with others.

Pest Control.

Control of stored-grain insects on the farm. By G. E. Lehker.
Lafayette, Ind., 1941. 4p. Indiana. Purdue university.
Extension service. Extension leaflet no. 224.

False paradise for pests. By Charles M. Hackett. Scientific
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pumping process. Little progress has been made toward unification of
data by means of comprehensive theoretical background. In field of
transportation of solids by streams in open channels notable work has
been done by number of men. However, direct application of their
approach to problem of transportation of solids in pipes does not seem
feasible at present time. Purpose of this study is to provide elemen-
tary theory on basis of which certain features of available experimental
data on transportation of solids in pipes may be interpreted. Theory
is neither complete nor directly concerned with details of mechanics of
turbulence process in maintaining solids in suspension, but rather
represents analysis of mechanics of flow on basis of energy relation-
ships; and it results in an explanation of several important and pre-
viously noted but unsatisfactorily explained features of flow. Experi-
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